Statewide Data Program Needs Assessment

River Investigations Branch

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Program Description

The branch does four things:

Community assistance in the form of National Flood Insurance Program, flow data dn flood mapping.

Arroyo Passajero and Cantua Creek – flow data for SWAPO, precipitation, flow, sediment transport, water quality and ??

In the late 1990s, DWR did a feasibility with the US Army Corps of Engineers. They could not really agree on what to do, and had a falling out. The last flood was 1995. People forget. The program has only two sites now. They are hard to monitor.

Restoration – Conservation and Delta Fish Agreement on the tributaries to the San Joaquin River. The data collected includes topography, hydrology, hydrography, sediment transport. DWR has flown some aerial photography and the LiDAR.

San Joaquin River Restoration (different from above) – the program is managed by USBR. DWR is an implementing agency. The program collects LiDAR, aerial photography, bathymetry data. There are previous studies. The program contributes data to developing and calibrating hydraulic models for flow data. The program collects sediment transport, channel bed data, scour studies, transport studies. USGS and USBR collect a lot of water quality data.

The program needs to understand losses from the river. So if there are requirements for fish flows, then losses can be added in to the release requirements.

DWR mionitors four stations, as requirementecd by the lawsuit.

All the funding is Prop 84. This is going to go away soon.

There is a lot of geotechnical data, soil borings, borrow pits and soil samples. There are a lot of fish passage data: structures for 180 miles.

DFG collects a lot of water temperature data.

The branch deals with levees on the San Joaquin River, and the risk of flood assessment.

They do environmental surveys on the river, benthic and invertabrite studies. All this information goes into SWAMP.

The program puts out annual technical reports. These go to USBR, who slaps a cover on it and publishes it. They give DWR credit. There are over 100 reports.

USBR has a Monitoring and Analysis Plan. This says who will collect what and where.

The program collects lots of photos.

Dave works on the River Restoration Program. This is a program on the San Joaquin River just in Fresno. It is funded by Prop 84. It is a State agency with just three people.

The Delta Fish Agreement is run by DWR and Department of Fish and Game. It is funded by the State Water Project Contractors as a way to mitigate the project.

The San Joaquin River Restoration Program collects a lot of data:

Topography for landform modeling

River stage and flow for surface water by Iris' group.

Sediment transport for the real time program. This is not comprehensive data, just local data where the program needs it.

Aerial photographs, both historical and present day photos to document the changes.

Geodetic survey data is gathered.

Bathymetry data is gathered.

The hydraulic profile is models at six to eight different flow rates for most of the length of the river.

One of the issues is how to store and disseminate the data? Most of the files are in Excel and are on the file server. Many of the files are in Civil3D format. This is an add-on to AutoCAD.

The group uses AutoCAD Vault to store files, and maintain versions. This is a good storage system, but probably would not work across regional offices.

The group uses HecRAZ for its hydrologic modeling.

Greg Farley

He works mostly with floodplain managers. He uses Bulletin 195 a lot. Some of the gauges that he needs are not operated any more, and have not been operated since 1975 (or 1978). The local agencies are throwing away data as people retire.

The program he works on works with local agencies to develop flood insurance plans. They collect elevation data after a flood event. They use reports for flood plain mangers.

He needs old precipitation gauges to be monitored again. Greg would be able to tell you which gauges if we wanted to know.

Josh works on Cantua Creek and Arroyo Passajero . They measures stage, flow, water quality, suspended sediments, percipitatino. There are 11 sites. In addition, they use a lot of topographic data.

The program track overflows (releases) into the California aquaduct. In some years, there may be as much as 5,000 cfs. This is an issues for DWR and CalTRANS.

He stores the files as paper copies and Excel files. Two of the sites report to CDEC. 1 site is monitored by the USGS.

The program uses mostly State Water Project funds.

The program needs to upgrade their equipment to an electronic format. For stage, they are using a Steven's recorder. (Greg asked if this could be used by anyone else in the Department if the regional office retires it? Curtis thinks it could be used by someone else.)

Standardizing on equipment would be a good thing, and useful. Right now, a lot of the equipment is maintained by the San Luis Field Division, as part of O&M. A road to one of the sites washed out on Smith Mountain. This is a key site, but is maintained by USGS.

Over time, the Joaquin Ridge equipment has been moved. There are no records of why or by whom.

The program does not know who maintains the easements for the Department. I suggested talking to Carole Leong's group.

Greg suggested it would be good to get Jim Goodridge's Hydrology manual. I do not know if Jim still has one laying around. I should check with Peter, and ask him to check with Jim.

DWR does not really collect precipitation data any more.

What data does your program need to be successful?

More aerial photos could be used.

Do you have the data your program needs?

Is data managed in a way that meets your program needs?

Do you have unmet needs

How are you accountable as a program manager?

Apportioning Costs

Other Issues –
How do you budget?